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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,440	04/13/2000	TOMOKAZU HAMADA	2153-107	7138

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EXAMINER

HOANG, THAI D

ART UNIT PAPER NUMBER

2667

DATE MAILED: 06/15/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/529,440

Applicant(s)

HAMADA ET AL.

Examiner

Thai D Hoang

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 7-14 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 15 is/are rejected.
- 7) ☒ Claim(s) 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(e) as being unpatentable over Andersson et al, US Patent No. 6,240,125 B1, hereafter referred to as Andersson.

Regarding claims 1, 2 and 5, as best understood, Andersson discloses a method and means for frequency hopping in a FDMA or TDMA or CDMA radio communication system; col. 4, lines 61-64. Andersson teaches that the system comprises a base station communicates with a plurality of mobile stations. The system measures interference of channels with respect to uplink connections and with respect to downlink connections. The measured interference values are then stored in an interference list for each of the connections in the base station of the radio communications system; fig.

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2, abstract, col. 3, lines 6-22 (an interference time slot database for registering/storing thereinto a communication time slot in which interference happens to occur). Andersson discloses that the base station has a control unit (figs. 4b and 4d) to measure and reallocate channel/timeslot for uplink and downlink to the respective mobile station according to the interference information of the channel/timeslot stored in the database; col. 6, lines 11-30; lines 54-57; col. 6, line 65-col. 7, line 3 (a TDMA control unit for executing reallocation/rearrangement of time slots communicating with the respective subscriber stations in response to a change in a traffic based upon the interference time slot information of the interference time slot database; wherein when interference is detected in a predetermined time slot received from a subscriber station, said interference time slot information is registered into said interference time slot database; the time slot reallocation/rearrangement are carried out based upon registered information of said interference time slot database; and also time slot reallocation/rearrangement information is transmitted to the respective subscriber stations)

Regarding claim 4, in figs. 4b-d and 5a-b, Andersson shows that the timeslots in a time frame are changed when the base station allocates timeslot for each mobile station corresponding to the interference information stored in the list; col. 6, lines 11-30; lines 54-57; col. 6, line 65-col. 7, line 3 (time slot allocations/arrangements of the respective subscriber stations are changed all at once every super frame of a TDMA frame, and wherein a base station transmits to the respective subscriber stations,

subsequent time slot reallocation/rearrangement information with different time slot arrangements in a plurality of frames within a super frame period.)

Regarding claim 6, Andersson discloses that the system reallocates timeslot channels for each sector; fig. 5, lines 41-49 (the interference time slot database manages the interference time slot information every sector.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson et al, US Patent No. 6,240,125 B1 in view of Alanara US Patent No. 6,286,122 B1, hereafter referred to as Andersson and Alanara respectively.

Regarding claim 15, Anderson discloses that the mobile station measures and sends interference value (I) of the channel to the base station; col. 3, lines 16-21 and col. 7, lines 45-47. Therefore, it implies that even though the interference does not occur in the channel, the mobile station has to send this interference value (I) to the base station. Anderson does not disclose that the mobile station waits for the interference disappear in a predetermined time period. However, Alanara discloses a system, in which the mobile station periodically combines a comfort noise parameter with a channel quality measurement and sends the combined message to the base station; abstract, col. 4, lines 4-10. It would have been obvious to one of ordinary skill in

the art at the time the invention was made to apply Alanara's method into the system disclosed by Andersson in order to make sure the quality of the channel.

Allowable Subject Matter

Claims 3, 7-14 and 16-17 are allowed.

Andersson et al, US Patent No. 6,240,125 B1 disclose "Method and means for frequency hopping in a FDMA or TDMA or CDMA radio communication system". Ueno, US Patent Application Publication No. 2003/0022692 discloses "Method, wireless network system and base station thereof for controlling power to send radio waves from a base station connected with a network system". Both Andersson and Ueno do not do not teach or fairly suggest the following features:

A base station apparatus for communicating with a plurality of subscriber stations in a TDMA wireless communication manner, comprising: an interference time slot database for registering/storing thereinto a communication time slot in which interference happens to occur, wherein in the case that said interference time slot is received for a predetermined time period and the interference disappears, the interference time slot information registered into said interference time slot database is deleted therefrom as recited in claims 7 and 11.

Claims 8-10 and 12-14 are also allowed because they depend on allowed claims 7 and 11 respectively.

Claims 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 3 is allowed for reasons given in the previous action.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 6/10/04